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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/739,081 | 12/19/2003 | Hisaji Nakagawa | S0303T | 9919 |
| 7590 | 03/22/2005 | | EXAMINER | |
| TAKEUCHI & TAKEUCHI 1700 Diagonal Road, Suite 310 Alexandria, VA 22314 | | | WALBERG, TERESA J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3753 | |

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|-------------------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/739,081 | NAKAGAWA, HISAJI <i>ED</i> | |
| | Examiner | Art Unit | |
| | Teresa J. Walberg | 3742 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 and 3-7 is/are rejected.
- 7) Claim(s) 2 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 June 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over DuPont et al (5,484,506) in view of Abbott et al (6,762,396).

DuPont et al disclose a fusion joining device for plastic tubes that heats the joint portion of plastic tubes for fusion joining including a fusion joining head with a pair of members for heat conduction, a pair of clamps, and a pair of heaters, the members for heat conduction being opposed to each other through the joint portion, the pair of clamps being pivoted between closed and open positions, and the heaters being resistance heating elements.

DuPont et al. do not disclose the heaters being in the shape of a sheet.

Abbott et al disclose the use of sheet shaped heaters deposited on substrates (col. 3, lines 39-49) and teach that such heaters can be used for thermoplastic welding (col. 10, lines 20-23).

It would have been obvious in view of Abbott et al to use a sheet shaped heater in the fusing apparatus of DuPont et al rather than cartridge shaped heaters, the motivation being to spread the heating over a wider area and more evenly heat the circumference of the tube.

3. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over DuPont et al (5,484,506) in view of Abbott et al (6,762,396) as applied to claim 1 above, and further in view of Chapman (3,065,536).

DuPont et al in view of Abbott et al disclose the claimed structure with the exception of the heaters being connected in series and one electrode is provided on each portion of the clamps.

Chapman discloses a clamp type tube welding apparatus in which the heating elements are connected in series and one electrode is provided on each portion of the clamp. See Fig. 3.

It would have been obvious in view of Chapman to provide such electrical connection structure for the heaters of DuPont et al in view of Abbott et al for easier connection of the heating elements and access to the connections for repairs.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over DuPont et al (5,484,506) in view of Abbott et al (6,762,396) as applied to claim 1 above, and further in view of Ross et al (5,352,871).

DuPont et al in view of Abbott et al disclose the claimed structure with the exception of the shape of the heaters.

Ross et al disclose a fusion joining device having heaters arranged in the claimed shape. See Fig. 7.

It would have been obvious in view of Ross et al to provide such a heater shape for the heaters in the fusion joining device of DuPont et al in view of Abbott et al to compensate for heat losses at the joints of the clamp and thus obtain more even heating of the tube.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5 and 6 each refer to "said supporting head", however claim 1 from which they depend does not include a supporting head. It appears that claims 5 and 6 were intended to depend from some other claim, but it is unclear which one. Since the proper dependency and scope of claims 5 and 6 cannot be determined, they have not been examined on the merits at this time.

7. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Derbyshire, Busch, Wyke et al, Kodama et al, and Chenault are

cited to show pipe joining devices. Field and Hjortsberg et al. are cited to show pipe heating structure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Teresa J. Walberg
Primary Examiner
Art Unit 3742

tjw